

# 1. Introduction

A Subject Matter Expert (SME) plays a vital role in the development of question banks used in assessments, certification programs, and competitive examinations. Their expertise ensures the validity, reliability, and fairness of the assessment process. This document outlines the key responsibilities, roles, and eligibility criteria for SMEs involved in question bank development.

## 2. Definition of a Subject Matter Expert (SME)

A Subject Matter Expert is a highly experienced professional with deep domain knowledge and expertise in a specific subject area. SMEs are responsible for curating, designing, and validating assessment questions that align with learning objectives and industry standards.

## 3. Key Roles of a Subject Matter Expert in Question Bank Preparation

SMEs perform multiple roles in the development and maintenance of question banks to ensure quality assessments. The primary roles include:

### 3.1 Question Development

- Designing high-quality questions aligned with the syllabus and learning outcomes.
- Ensuring that questions cover varying levels of difficulty (easy, moderate, and difficult).
- Preparing multiple-choice, descriptive, and practical-based questions.
- Using Bloom's Taxonomy to structure questions that test different cognitive levels (Knowledge, Comprehension, Application, Analysis, Synthesis and Evaluation).

### 3.2 Standardization and Validation

- Reviewing and verifying the accuracy and clarity of questions.
- Ensuring the correctness of answer keys and explanations.
- Collaborating with other SMEs and academicians for peer review.
- Removing ambiguous, biased, or misleading questions.

### 3.3 Blueprint and Framework Design

- Developing question blueprints to ensure balanced coverage of topics.
- Defining weightage distribution for various sections.
- Structuring question banks to meet specific exam patterns and guidelines.

### 3.4 Alignment with Industry and Educational Standards

- Ensuring compliance with national and international educational frameworks.
- Incorporating changes based on evolving industry requirements.
- Aligning assessments with skill development programs and competency frameworks.

### 3.5 Difficulty Level and Psychometric Analysis

- Assigning difficulty levels to each question based on statistical analysis.
- Ensuring the question bank has an appropriate mix of easy, moderate, and hard questions.
- Using psychometric techniques to maintain the validity and reliability of questions.

### 3.6 Compliance with Assessment Guidelines

- Ensuring that questions adhere to accreditation and certification requirements.
- Aligning questions with regulatory and compliance frameworks such as NSQF and other governing bodies.
- Maintaining confidentiality and security of question banks to prevent leaks or misuse.

### 3.7 Question Bank Review and Updating

- Conducting periodic revisions to update questions based on new developments.
- Identifying outdated or redundant questions and replacing them with updated content.
- Collecting feedback from assessors, candidates, and educators to improve quality.

## 4. Responsibilities of SMEs in Question Bank Development

The responsibilities of SMEs in question bank development go beyond creating questions. They are entrusted with maintaining the integrity of assessments. Key responsibilities include:

### 4.1 Ensuring Content Accuracy and Relevance

- Developing factually correct and conceptually accurate questions.
- Ensuring questions are free from errors, biases, or misleading language.
- Verifying that answer choices are logically structured and unambiguous.

### 4.2 Adapting Questions to Different Exam Formats

- Creating objective (MCQ, true/false, fill-in-the-blank) and subjective questions.
- Developing case-based, scenario-based, and practical-oriented assessments.
- Preparing adaptive questions for computer-based testing (CBT) platforms.

### 4.3 Ensuring Diversity and Inclusivity

- Designing questions that cater to a diverse group of learners.
- Avoiding gender, cultural, or socioeconomic biases in question framing.
- Making assessments accessible for students with disabilities.

#### 4.4 Data Security and Confidentiality

- Following strict protocols to prevent question leaks.
- Securing digital and physical copies of question banks.
- Using encrypted storage systems to maintain confidentiality.

#### 4.5 Collaborating with Assessment Bodies and Institutions

- Working with academic boards, universities, and skill assessment bodies.
- Attending workshops, training programs, and expert panels for question development.
- Sharing expertise to enhance the effectiveness of evaluation methodologies.

#### 4.6 Continuous Professional Development

- Staying updated with the latest industry trends and educational advancements.
- Participating in research and development for better assessment practices.
- Engaging in training programs to improve assessment writing skills.

## 5. Eligibility Criteria for Subject Matter Experts in Question Bank Development

To maintain high standards in assessment quality, SMEs must meet specific eligibility criteria based on their expertise and experience.

### 5.1 Educational Qualifications

- A bachelor's, master's, or doctoral degree in the relevant subject domain.
- Professional certifications in the field of expertise.
- Additional qualifications in instructional design, education technology, or assessment methodologies (preferred).

### 5.2 Work Experience

- Minimum of 7-10 years of industry or academic experience in the relevant field.
- Hands-on experience in curriculum design, assessment, or question bank development.
- Prior experience in working with national and international assessment frameworks.

### 5.3 Technical and Pedagogical Skills

- Expertise in subject matter with strong analytical and research skills.
- Ability to write clear, concise, and structured questions.
- Familiarity with assessment software and Learning Management Systems (LMS).

#### 5.4 Communication and Collaboration Skills

- Strong written and verbal communication skills.
- Ability to work with instructional designers, educators, and exam coordinators.
- Experience in training and mentoring assessment developers.

#### 5.5 Ethical and Professional Conduct

- Commitment to maintaining confidentiality and integrity in question bank preparation.
- Adherence to ethical guidelines and professional standards.
- Strong sense of responsibility towards fair and unbiased assessments.

### 6. Conclusion

Subject Matter Experts (SMEs) play an indispensable role in ensuring the effectiveness, fairness, and quality of assessments through well-structured question banks. By adhering to the outlined roles, responsibilities, and eligibility criteria, SMEs contribute to the credibility and reliability of certification and examination systems.

Durga Skills acknowledges the vital contributions of SMEs and ensures that question banks developed by them meet high standards of accuracy, relevance, and assessment quality. With continuous training, collaboration, and adherence to best practices, SMEs can enhance assessment methodologies and contribute significantly to the education and skills sector.